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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,492	10/02/2003	Ralf Krueger	LWEP:119US	2491
24041	7590	03/09/2005	EXAMINER	
SIMPSON & SIMPSON, PLLC 5555 MAIN STREET WILLIAMSVILLE, NY 14221-5406			PRITCHETT, JOSHUA L	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/605,492		KRUEGER, RALF	
	Examiner		Art Unit	
	Joshua L. Pritchett		2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-13 is/are rejected.
- 7) ☐ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10-03, 2-04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Preliminary Amendment filed March 1, 2004. Claims 4-7 have been cancelled and claims 8-13 have been added as requested by the applicant.

Claim Objections

Claims 2 and 3 are objected to because of the following informalities: the parent claim 1 recites "at least one layer" and the dependent claims 2 and 3 recite "the layers." The limitations of claims 2 and 3 should be changed to "the at least one layer" or a limitation added the parent claim 1 stating that multiple layers exist in the modulator, so that the claim language compliments one another better to allow easier interpretation of the claim limitations. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman (US 4,200,354) in view of Greywall (US 5,684,631).

Regarding claims 1-3 and 13, Hoffman teaches an apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator (8) arranged in each pupil plane (Fig. 1) in the observation beam path (Fig. 1) and containing at least one layer (8) modifying the phase or amplitude (abstract), and a stop (Fig. 10) in the illumination beam path (Fig. 1). Hoffman further teaches the use of a tilting optical element (4) to direct the observation light beam onto a desired location on modulator (8) (col. 4 lines 10-15). Hoffman further teaches that optical element (4) can be eliminated. Hoffman lacks reference to the modulator tilting. Greywall teaches the use of a tilting modulator to modify the phase or amplitude (col. 1 lines 46-56). Greywall further teaches the layers of the modulator are configured in such a way that the greatest possible phase shift is already achieved by a slight tilt (col. 1 lines 46-56). The Greywall reference meets the broadest reasonable interpretation of the phrase "slight tilt." Greywall further teaches the layer comprise plates of various glass (col. 9 lines 24-31). It would have been obvious to a person of ordinary skill in the art to have the modulator of Hoffman capable of tilting as taught by Greywall for the purpose of eliminating the need for the optical element (4) of Hoffman to reduce aberrations in the image created by the extra optical element.

Regarding claims 8-10, Hoffman teaches the invention as claimed but lacks reference to the use of a defined variable layer configuration. Greywall teaches the use of a defined variable layer configuration (col. 1 lines 14-26). It would have been obvious to a person of ordinary skill

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in the art to have the Hoffman invention include the defined variable layer configuration of Greywall for the purpose of attenuating the modulator the desired phase or amplitude shift.

Regarding claim 11, Hoffman teaches an apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator (8) arranged in each pupil plane (Fig. 1) in the observation beam path (Fig. 1) and containing at least one layer (8) modifying the phase or amplitude (abstract), and a stop (Fig. 10) in the illumination beam path (Fig. 1). Hoffman further teaches the use of a tilting optical element (4) to direct the observation light beam onto a desired location on modulator (8) (col. 4 lines 10-15). Hoffman lacks reference to polarization. Greywall teaches the use of phase shifting, optical polarization means with retardation plates (col. 9 lines 3-31). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Hoffman invention include the polarization means of Greywall for the purpose of providing uniform observation light to the observer.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of MacDonald (US 6,462,858).

Hoffman teaches an apparatus for implementing phase-contrast or modulation-contrast observation on microscopes with the aid of a modulator (8) arranged in each pupil plane (Fig. 1) in the observation beam path (Fig. 1) and containing at least one layer (8) modifying the phase or amplitude (abstract), and a stop (Fig. 10) in the illumination beam path (Fig. 1). Hoffman further teaches the use of a tilting optical element (4) to direct the observation light beam onto a desired location on modulator (8) (col. 4 lines 10-15). Hoffman lacks reference to the modulator being

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supported on a carrier. MacDonald teaches the use of a carrier introducible into the beam path (Fig. 6) and mounted on the carrier and capable of tilting (col. 6 lines 33-34). The modulator of MacDonald contains a plurality of different modulating regions and can therefore be interpreted as a plurality of modulators. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Hoffman invention include the carrier of MacDonald for the purpose of precisely and accurately manipulating the positioning of the modulator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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JLP *JP*

A handwritten signature in black ink, appearing to read "Drew A. Dunn", with a stylized, sweeping flourish at the end.

DREW A. DUNN
SUPERVISORY PATENT EXAMINER